NEW CULTIVARS

Keywords: cultivar: *Dionaea* 'Korrigans', *Dionaea* 'Scarlet Bristle', *Sarracenia* 'French Kiss', *Sarracenia* 'Orange Fire', *Sarracenia* 'Bordeaux Red Wine', *Sarracenia* 'Přemysl Otakar I', *Sarracenia* 'Rudolf II', *Byblis liniflora* 'David', *Dionaea* 'Korean Melody Shark'

Dionaea 'Korrigans'

Submitted: 13 October 2009

I found *Dionaea* 'Korrigans' in a garden center on 17 October 2007. The trap is fused with the petiole on all traps during the entire year (see Figures 1 and 2). Because of this fusion, the traps do not close well and the captured prey can sometimes escape. It's a very vigorous *Dionaea* and it divides many times each year. The color inside the traps is green and sometimes slightly red.

I have given the name Korrigans to this *Dionaea* because of the fusion between the petiole and the trap. Korrigans, here in Brittany, are little strange characters who have a human top of the body fused with animal legs. On this *Dionaea* cultivar, the trap part, which could fancifully be thought of as animal-like, is fused with the more mundane and vegetable-like part – the petiole.



Figure 1: *Dionaea* 'Korrigans' plant. Photo by Guillaume Bily.

Figure 2: *Dionaea* 'Korrigans' fused trap and petiole. Photo by Guillaume Bily.

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Dionaea 'Scarlet Bristle'

Submitted: 15 July 2009

The 'Scarlet Bristle' (see Figure 3) is distinct in its attributes as the leaf blades and traps exhibit scarlet to burgundy coloration in filtered sunlight and are held prone to the surface of the growing medium in all seasons of growth. The marginal trap cilia are greatly reduced, irregular and devoid of fine hairlike tips which imparts a rough bristly appearance to the trap lobe margins. This is clearly different in structure from the 'Red Piranha' as the triangular shaped marginal cilia are commonly uniform and evenly spaced on the 'Red Piranha'. Another interesting characteristic of the 'Scarlet Bristle' is that mature trap trichomes (trigger hairs) continue to develop a thick bristly growth on their upper portion as the traps age (see Back Cover). Although absent in young plants this unique attribute is very apparent in older plants, is readily visible to the naked eye and can resemble anything from a spear-head shape to the bristle end of a bottle brush. This extra growth on the trichomes appears to neither impede nor enhance trap function but does make itself worthy of continued study. Unlike the 'Bohemian Garnet' the 'Scarlet Bristle' grows equal in size to the regular form of *Dionaea* and does not produce copious numbers of offshoots after the plants have grown out of their TC vigor.

This cultivar was first discovered in the spring of 2006 while performing a replate of typical *Dionaea* tissue cultures. One small clump of plants caught my interest as it exhibited much red coloration to the trap lobes which was a contradiction to the uniform green that was always observed with that particular form of *Dionaea* under lab conditions. Upon closer inspection it was also noted that the marginal cilia on the traps was short and jagged in contrast to the cilia of other plantlets in the culture. As these particular *Dionaea* cultures had been maintained over the course of a few years on a basic 1/2 MS medium with no added PGR's one can only conjecture that the mutation developed through the multiple divisions that took place over that time. With great interest the specimen was isolated and propagated in sterile culture, planted out and hardened under artificial lighting followed



Figure 3: Dionaea 'Scarlet Bristle' plant. Photo by Richard Keehn.

by transfer to the greenhouse to be grown out. In the first year out of TC the 'Scarlet Bristle' remained predominantly green under artificial lighting but was quick to turn completely red when exposed to sunlight. During the first few months in the greenhouse the plants also exhibited much TC vigor by continuing to multiply by offsets. Although this was beneficial for obtaining a large number of plants, very few of the plants that were produced that first season achieved a size that was worthy of note and were left to go through dormancy so that developments could be observed in the next season. After 4 months of dormancy the plants were divided and grown separately at which time they displayed a tendency for increasing individual plant size instead of multiplication. It was in this second year out of TC that the more robust plants from year one confirmed the prone growth and enlarged trichome characteristics of the 'Scarlet Bristle'.

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Abbreviations used: MS (Murashige and Skoog), PGR (plant growth regulator), TC (tissue culture). Ed comment: the cultivar name to be registered is *Dionaea* 'Scarlet Bristle'. (JS)

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Sarracenia 'French Kiss'

Submitted: 19 November 2009

Sarracenia 'French Kiss' is a hybrid between *Sarracenia oreophila* and *S. leucophylla* made in 1998. At the beginning of the growing season it looks like an ordinary *S. leucophylla* with a green pitcher tube and a white spotted lid. Later on, the pitchers get much taller and become very colorful; the spots on the lid being brightly white and the throat having a solid red/pink color (see Figure 4). The pitcher tubes are 60 to 70 cm tall.

The name was derived from the form of the peristome. It reminded me of a mouth and suggested the cultivar name *Sarracenia* 'French Kiss'.

Vegetative propagation is necessary to maintain the unique features of this hybrid.



Figure 4: Sarracenia 'French Kiss' pitchers. Photos by Cédric Azais.

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Sarracenia 'Orange Fire'

Submitted: 19 November 2009

Sarracenia 'Orange Fire' is hybrid discovered by Gerd Bachert in a German garden center in 2005. At the beginning of the growing season the pitcher tube has some orange veins and a copper red lid. As the season progresses, the new pitchers become a very intense orange, like fire (see Figure 5). For this reason, we named it *Sarracenia* 'Orange Fire'. The pitcher tubes are of medium size, 40 to 50 cm tall. The flower is yellow/red.

Vegetative propagation is necessary to maintain the unique features of this hybrid.



Figure 5: Sarracenia 'Orange Fire' pitchers. Photo by Cédric Azais.

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Sarracenia 'Bordeaux Red Wine'

Submitted: 19 November 2009

Sarracenia 'Bordeaux Red Wine' is a hybrid between Sarracenia leucophylla and S. rubra subsp. gulfensis. The pitcher tube is 60 to 70 cm tall. The tube is green with a veined top, and the pitcher throat is wine red (see Figure 6). The name was inspired by a friend who saw the plant and told me it looked like a glass of red wine and also because Bordeaux is my native country. The cultivar name Sarracenia 'Bordeaux Red Wine' is thus particularly appropriate because Bordeaux wine is world famous.

Vegetative propagation is necessary to maintain the unique features of this hybrid.



Figure 6: *Sarracenia* 'Bordeaux Red Wine' pitchers. Photo by Cédric Azais. — CÉDRIC AZAIS • "buros" • 47200 Marcellus • France • azais.cedric@neuf.fr

Sarracenia 'Přemysl Otakar I'

Submitted: 1 February 2010

Sarracenia 'Přemysl Otakar I' was selected from the cross Sarracenia leucophylla \times (purpurea \times leucophylla) performed on 23 August 1999 (seeds collected 23 April 2000). The seed parent was a low quality clone of *S. leucophylla* that produced such narrow and uninteresting pitchers that it was subsequently eliminated. Pollen was taken from my favourite clone of *S. purpurea* \times leucophylla. The origin of this pollen clone is uncertain; the only available information is that seeds were imported to our country in the late 1980s from Hungary. Based on flower colour and stalk height, the seed parent plant was most likely *S. purpurea* subsp. purpurea.

During the second year, when the seedlings were about 7 cm tall, one blazed like a jewel among the others. This seedling maintained its quality during subsequent years and even improved its colouration.

The cultivar's pitchers are 50–60 cm tall and 4–5 cm wide in their upper part (see Front Cover and Figure 7). The lid is about two times broader than the tube, with a maximum observed width of 10 cm. The lid is upright, flat, and semicircular in shape. The margin of the lid is finely undulated, similar to *S. leucophylla*. The most outstanding quality of 'Přemysl Otakar I' is its intense and contrasting colouration. The upper part of the pitcher is red-violet with remarkably strong veining that is an extremely deep maroon similar to the colour of black cherries. The white fenestrations contrast gorgeously with the maroon venation. The flower is similar to that of *S. leucophylla* in shape and colour (see Figure 8).



Figure 7: *Sarracenia* 'Premysl Otakar I' pitcher. Photo by Miroslav Srba.



Figure 8: 'Premysl Otakar I' flowers. Photo by Miroslav Srba.

Cultivar	'Přemysl Otakar I'	'Kateřina'	'Juthatip Soper'
colouration	Pitcher with white fenestration interlaced by strong venation. The tone of the veins is deep maroon. Freshly opened pitchers are similar to that of <i>S. leucophylla</i> in colour. Senescent pitchers are almost completely maroon.	Freshly opened pitchers are pink, later all red. Fenestration is completely covered by red pigments.	Pitchers red-pink, fenestration covered by red pigments. Young pitchers intensively fenestrated.
lid	Upright, flat, semicircular in shape; $2 \times$ broader than peristome.	Lid almost horizontal; about same width as the peristome.	Skew lid, almost triangular in shape; about 1.5 × broader than peristome.
pitcher length	50–60 cm	60–70 cm	30-40 cm
peristome width	50–60 cm	60–70 cm	30–40 cm

Table 1: Differences of Sarracenia 'Přemysl Otakar I' from similar cultivars.

Cultivation is the same as with other *Sarracenia*. This cultivar is moderately winter-hardy. Plants grown in 10 cm pots survived -5° C without damage. The plants produce a remarkably rich abundance of roots similar to some clones of *S. flava* × *leucophylla*. As a result, small rootless or poorly rooted cuttings can be established easily. *Sarracenia* 'Přemysl Otakar I' must be propagated vegetatively to maintain its characteristics.

The name of the cultivar is dedicated to Czech King Přemysl Otakar I (Ottokar I of Bohemia in English textbooks) who governed Bohemia from 1192-1193 and 1197-1230. This monarch is credited with establishing the internal stabilization of Bohemia and strengthening the political, religious, and cultural independence of the Czech Kingdom within Europe and especially of the Holy Roman Empire. My first registered *Sarracenia* cultivar is dedicated to the man in whose name is also epithet "the first". The plant is remarkably slender and tall in its physique, as was King Přemysl Otakar I. The King was an outstanding and gorgeous personality of Czech history as the plant is among other plants in any grower's collection.

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Sarracenia 'Rudolf II'

Submitted: 1 February 2010

Sarracenia 'Rudolf II' is a selection from the complex cross Sarracenia (purpurea \times leucophylla) \times minor var. okefenokeensis. This was my beginner experiment breeding Sarracenia (pollinated in May 1996, seeds collected 22 September 1996), which I performed as a teenage grower. The seed parent was the same clone of S. \times mitchelliana that served as the pollen donor for Sarracenia 'Přemysl Otakar I', and the pollen parent was a clone of Sarracenia minor var. okefenokeensis donated by Dr. Miloslav Studnička. I expected that the hybrid's appearance would resemble a robust Sarracenia minor with a raised lid and enhanced colouration.

One particular seedling from the cross, when about 10 cm in size, seemed to be typical except for one remarkable detail which caught my eye - white dots were unusually distributed near the edge of the lid, which otherwise lacked the fenestrations found in *S. minor* (see Figure 9). I had never seen such a fenestration pattern before. This seedling increased in colour and size during subsequent years.

The first spring pitchers on mature plants are about 70 cm tall. Later pitchers are 10–20 cm smaller, but are more robust and better coloured. The peristome can be 6–7 cm broad and the maximum width of the lid is 13.5 cm. The lid is shell-shaped, intensively veined, and fine-haired on the bottom side. Pitchers of plants well exposed to the sun become all red, except for the basal third which usually

stays green. Fenestrations are concentrated on the posterior side of the pitcher, as in S. minor; but the areoles are just smaller. Pitcher colour can change to a green surface with pink areoles during low light levels and cold stress during the winter. Some growers like this unique pattern. The plants form well-coloured and remarkably robust pitcher-rich clumps (see Figure 10).

Although the plant is a showstopper during the summer exhibitions, it is also superb in the spring due to its flowers, which are 6-8 cm in diameter and held on 60-80 cm tall stems. The superior (exposed) surfaces of petals and sepals are maroon, while the inferior (hidden) surface is yellow (see Figure 11). The umbrella-shaped style is green. Light yellow basal parts of petals form a consistent band surrounding the flower which is in great contrast to its maroon colour. Sepals and petals are remarkably solid and regularly shaped. Taken together, the quality of the Sarracenia 'Rudolf II' flowers exceeds those of similar bicoloured hybrids, especially in colour and shape. They are very suitable as cut flowers, thanks to the tall, strong, and straight stems.

The cultivar is a robust grower similar to S. minor var. okefenokeensis or S. \times mitchelliana. It is highly resistant to rhizome rotting, thanks to the S. minor var. okefenokeensis influence. Thin and long bases are frequently unable to hold very heavy pitchers, so affixing of the clump is sometimes necessary. This is improved when the plants are grown separately in full sunlight and a well-ventilated place. The cultivar can be maintained in huge clumps, but the pitchers are larger and better coloured when plants are grown separately. The capsules contain numerous (500-1000), large and highly viable seeds. Offspring of the cultivar are also vigorous and usually attractive in their colouration.

The cultivar is named after Rudolf II, King of Bohemia and Holy Roman Emperor, who governed Czech countries during 1575-1611. Rudolf II was tall, robust, clad in colours, and a little bit cockeyed, similar to the appearance of this cultivar dedicated to him. Rudolf II greatly supported economical and cultural progress of the Czech Kingdom. During his period, Prague became a center of European cultural and scientific life, employing such personalities as Tycho Brahe, Johannes Kepler, Albrecht Dürer, Pieter Brueghel, Giuseppe Archimboldo, Edward Kelley, and John Dee. Rudolf II is considered to be a striking and positive personality of Czech history.



Figure 9: Sarracenia 'Rudolf II' pitcher detail. Photo by Miroslav Srba.

Figure 10: Sarracenia 'Rudolf II' plant. Photo by Miroslav Srba.



Figure 11: Sarracenia 'Rudolf II' flower. Photo by Miroslav Srba.

This cultivar is available in restricted quantity and can be obtained directly from me (srba@sarracenia.cz), Michael King, or Kamil Pásek.

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Byblis liniflora 'David'

Submitted: 7 March 2010

I purchased seed labeled *Byblis liniflora* from Rare Exotic Seeds on 12 February 2009. I soon discovered that the resulting plants possessed the same pulvinus anomaly that was first documented by *Byblis filifolia* 'Goliath' in 2008. However, this marvelous cultivar is much smaller (to 20 cm tall) and forms pulvinus on the leaf axils as well as the pedicels. Interestingly, pulvinus formation is unconditional and the leaves move downward to form a tripod-like support for the plant (see Figure 12). Another distinguishing factor is the existence of sessile glands on the shoot apex and leaves (see Figure 13). Branching is rare but does occur.



Figure 12: *Byblis liniflora* 'David' pulvini and sessile glands.



Figure 13: *Byblis liniflora* 'David' sessile glands.

Overall growing conditions have a great influence on the plant's flower structure. A comparison of sepal length to petal length unfortunately shows inconsistencies when compared to seedlings and clones in cultivation. The same inconsistencies exist when comparing filament to anther length. Anther coloration ranges from dark purple to light lavender, depending on the amount of sun received. Flower color ranges from light pink to dark purple. The back of the flowers range in color from white to tan or white with tan stripes. Striped and white flower forms are also known to exist. Equally important, overall growth habit and form is affected by lighting conditions, temperature differences, and moisture levels in cultivation. Therefore, one of the easiest ways to confirm that a plant is *Byblis liniflora* 'David' is the existence of unconditional pulvini and sessile glands.

Another important defining feature is that *Byblis liniflora* 'David' is self-pollinating and copious amounts of fertile seed are easily produced without any assistance, whereas *Byblis filifolia* 'Goliath' requires two genetically distinct plants for successful pollination.

Byblis liniflora 'David' can be reproduced from seed and cuttings, although cuttings have a low strike rate.

The name *Byblis liniflora* 'David' is coined from the well-known bible story of David and Goliath. The origin and meaning of the name is the same as in *Byblis filifolia* 'Goliath', except *Byblis liniflora* 'David' is much shorter, has sessile glands, and is self-pollinating. The leaves and pedicels move downward via pulvini unconditionally to support the plant in a tripod-like fashion.

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Submitted: 26 March 2010

This cultivar was produced by crossbreeding different clones of plants known informally in the UK as *Dionaea* "Shark Tooth". The crossbreeding was done in the Korean Carnivorous Plant Institute by the head of the institute Dr. Jang Gi-Won and his intern Max Yoon.

The crossbreeding was not done with the intention of producing a new cultivar. Normally work at our Institute focuses on conservation. We are currently involved in a project to prevent certain Korean carnivorous plants from extinction. For instance, *Drosera rotundifolia* L. once lived in many regions of Korea. However, due to mass construction and exploitation without awareness of the importance of conserving carnivorous plants, many natural habitats have been destroyed. Therefore, in order to conserve Korean carnivorous plants, we have practiced mass propagation techniques of carnivorous plants. This new *Dionaea* cultivar was one unexpected result of our work.

By germinating 100 seeds after asepsis, one plant appeared to be different from the other ninety nine. We separated this unique plant and mass propagated it. It seems like this cultivar, which we named *Dionaea* 'Korean Melody Shark,' is a sterile mutant—after growing the cultivar and finally seeing its flower, we discovered that the pistil and stamen do not reach maturity. Therefore, we could not collect any seeds. It is thus only possible to multiply the cultivar by dividing the rhizomes.



Figure 14: Dionaea 'Korean Melody Shark'.

Dionaea 'Korean Melody Shark' and its parent plants are similar, but there are some important differences. First, the petiole of *Dionaea* 'Korean Melody Shark' remains very thin and narrow throughout (see Figure 14). Traps that are not yet fully grown look like bean sprouts. When the traps are fully grown, they become broader in shape. The sawteeth along the trap margin of *Dionaea* 'Korean Melody Shark' are broader, shorter, and are arranged in a irregular pattern compared to those of its parents (see Figures 15 and 16). Finally, while the parent plants remain green throughout, the inside of the traps of *Dionaea* 'Korean Melody Shark' are red.

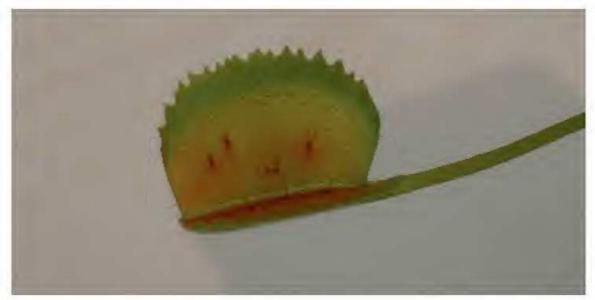


Figure 15: Dionaea 'Korean Melody Shark' trap.



Figure 16: Parent plants of *Dionaea* 'Korean Melody Shark' from the UK informally named *Dionaea* "Shark Tooth".

We named this cultivar "Korean" because it came from Korea, where this new carnivorous plant cultivar has been named, "Melody" because the traps look like musical notes, and "Shark" as an allusion to the informal name of the parent plants.

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